POCKET MULTIMETER

5115

ENGLISH

User Manual

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

Statement of Compliance

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments certifies that this instrument has been calibrated using standards and instruments traceable to international standards.

We guarantee that at the time of shipping your instrument has met its published specifications.

An N.I.S.T. traceable certificate may be requested at the time of purchase, or obtained by returning the instrument to our repair and calibration facility, for a nominal charge.

The recommended calibration interval for this instrument is 12 months and begins on the date of receipt by the customer. For recalibration, please use our calibration services.

Serial #: _____

Catalog #: 2154.10

Model #: 5115

Please fill in the appropriate date as indicated:

Date Received: _____

Date Calibration Due: _____

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Thank you for purchasing the AEMC Pocket Multimeter Model 5115. For best results and safety, read and follow all operating instructions and precautions for use.

	AC - Alternating current		DC - Direct current
	AC or DC		Double insulated
	Shock Hazard		Important note
	Battery		Comply with EU directives
	Diode		Earth Ground
	Process according to WEEE 2002/96/EC. Sorting for the recycling of electric and electronic waste in the EU.		Danger hazard

Definition of Measurement Categories

CAT IV: Test and measurement circuits connected to the source of the building's low-voltage network. *Examples:* Equipment upstream of the main fuse or building installation cut-off switch.

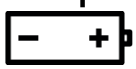
CAT III: Test and measurement circuits connected to parts of the building's low voltage network.
Examples: Distribution switchboards, circuit breakers, cables, busbars, junction boxes, outlets, motors permanently connected to the fixed installation.

CAT II: Test and measurement circuits directly connected to points of use (power outlets and other similar points) on the low voltage network.
Examples: Circuits in network for household appliances, portable tools, and similar instruments.

⚠ PRECAUTIONS FOR USE ⚠

Failure to comply with these safety instructions can create a risk of electric shock, fire, and explosion; resulting in destruction of the instrument, injury to the user, and damage to the facility. If the instrument is used other than as specified in this manual, the protection provided by the instrument may be impaired.

- Before using the instrument, make sure it functions properly by measuring a known voltage, and check continuity by short circuiting both test leads.

- Do not use the instrument in an explosive atmosphere or in the presence of flammable gas or smoke.
- Do not use the instrument on electrical networks with a rated voltage or category higher than those listed for the instrument.
- Be aware of the maximum rated voltages and currents between terminals and in relation to ground/earth.
- Do not use the instrument if it appears damaged, incomplete, or improperly closed.
- Before each use, check the condition of the housing and probes. Any instrument on which the insulation is deteriorated (even partially) must be set aside for repair or disposal.
- Observe all environmental conditions of use.
- Do not modify the instrument or replace components using equivalent parts. Repairs and adjustments must be performed by qualified, approved personnel.
- Replace the batteries immediately when the  symbol appears on the LCD display. Disconnect all connections before opening the instrument casing.
- Use personal protection equipment when conditions require it.

CONTENTS

1. INTRODUCTION

1.1. Receiving Your Shipment

Upon receiving your shipment, ensure the contents are consistent with the packing list. Notify your distributor of any missing items. If the equipment appears to be damaged, file a claim immediately with the carrier and notify your distributor at once, giving a detailed description of any damage. Save the damaged packing container to substantiate your claim.

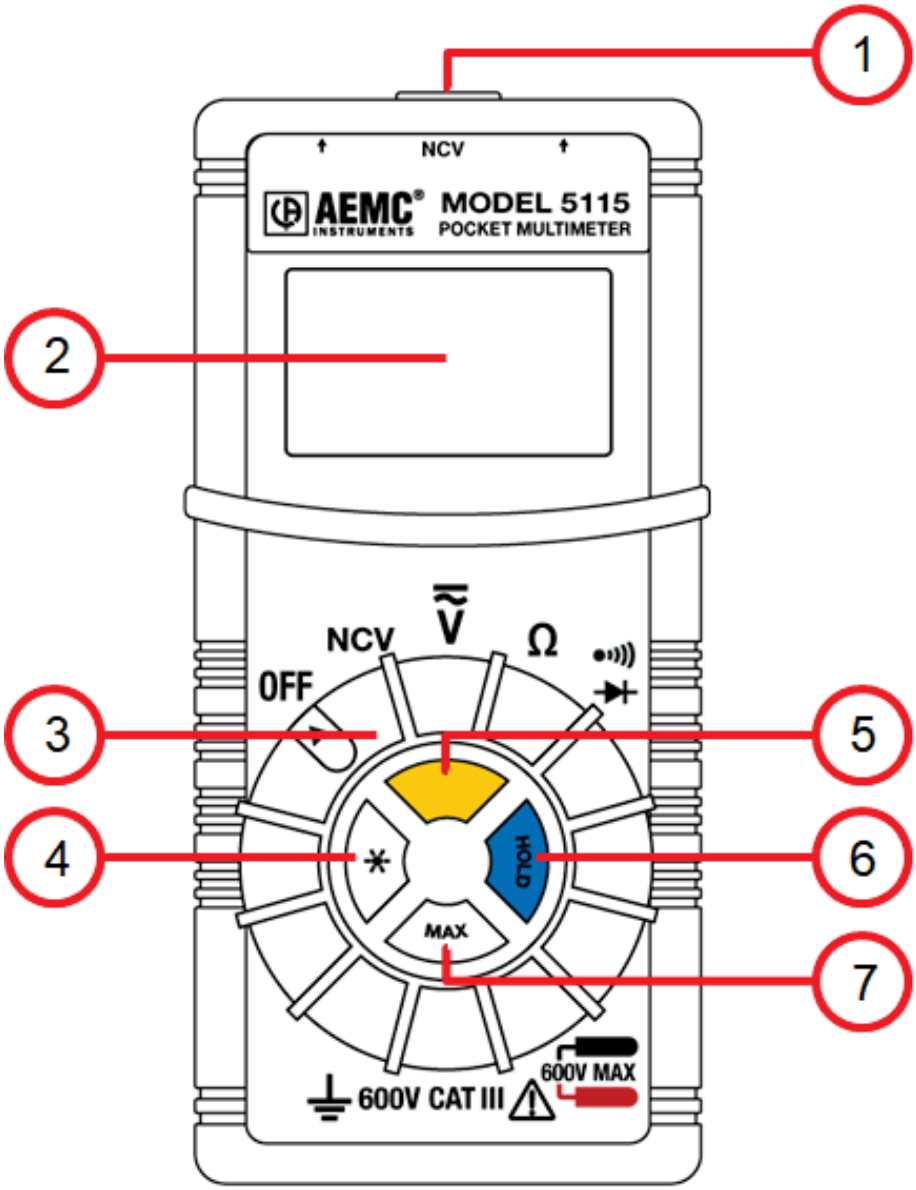
Ordering Information

Multimeter Model 5115……..**Cat. #2154.10**
Includes meter, soft carrying pouch, two lithium CR2032 batteries (installed), and user manual.

1.2. Description

The Model 5115 measures AC or DC voltage, resistance, and continuity (with buzzer). It can also perform a diode test.

1.3. Front Panel



1	Flashlight light	5	Function button
2	LCD display	6	HOLD button
3	Rotary selection switch	7	MAX button
4	Backlight/flashlight button		

1.4. Functions

Features:

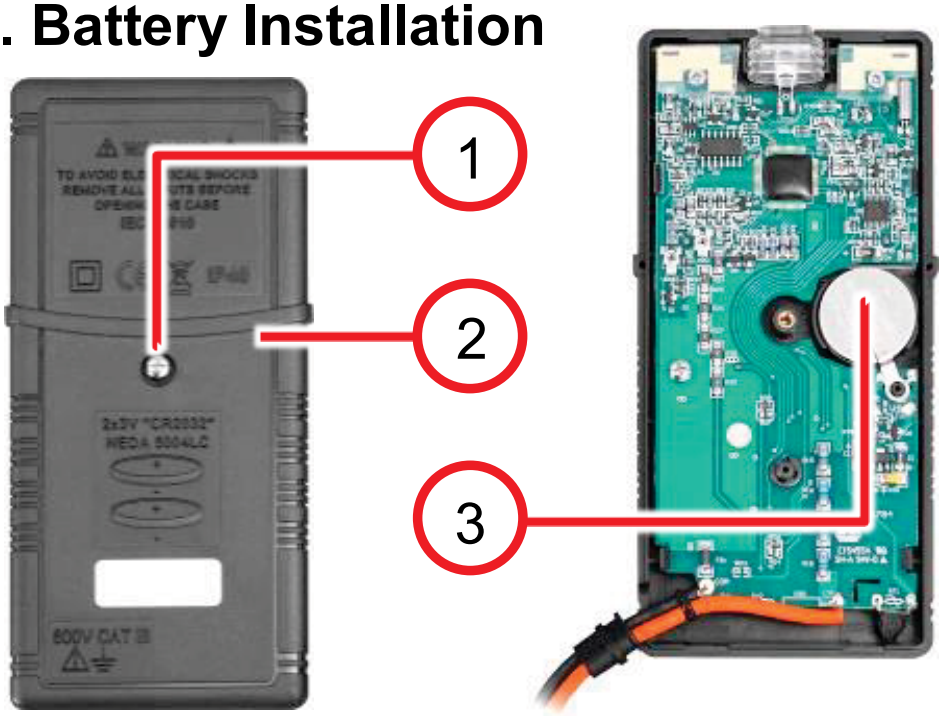
- Voltage to 600$V_{AC/DC}$
- Resistance to 20MΩ
- Continuity with beeper below 30Ω
- Full autorange
- Flashlight
- Non-contact voltage (NCV) detection
- MAX function
- Attached leads (2mm)
- IEC 61010-2-033 compliant
- Diode test

Specifications:

Display	LCD (includes backlight)
Counts	2000pts
Power	2 x CR2032
IP	IP40
Safety	600V CATIII
Operating range	32 to 122°F (0 to 50°C)
Accuracy	V_{DC}: 1.2% + 2cts V_{AC}: 1.5% + 8cts Resistance: 1.5% + 5cts

2. SETUP

2.1. Battery Installation



1	Fastening screw
2	Back cover
3	Lithium CR2032 batteries (two)

1. Remove the back cover fastening screw, using a Phillips-head screwdriver.
2. Remove the back cover.
3. Insert two lithium CR2032 batteries into the battery compartment. Ensure polarity is correct.
4. Replace back cover and fastening screw.

2.2. Instrument Check

We recommend performing this instrument check when using the instrument for the first time, or after a prolonged period without use.

1. Turn the rotary selection dial to •))) →|. The →| icon should appear on the LCD, and the measurement should appear as **OL**.
2. Press the yellow function key. The •))) icon should appear on the LCD.
3. Touch the test leads together. The beeper should sound.
4. Turn the rotary switch to ≂V, and check a known voltage (for example a battery). Ensure the reading is accurate.

2.3. Sleep Mode

To save battery life, the instrument automatically enters sleep mode and turns OFF the LCD after 30 minutes of inactivity. Press any key to restore normal operation.

3. OPERATION

3.1. Backlight/Flashlight

1. With the rotary switch turned to any setting other than OFF, press ☼ to turn ON the LCD backlight.
2. A second press of ☼ turns OFF the backlight and turns ON the flashlight.
3. A third press turns ON the backlight without turning OFF the flashlight.
4. A fourth press turns OFF both the backlight and flashlight.

Note the backlight blinks red in NCV mode if live AC voltage is detected (see §3.8).

3.2. Data Hold

Dangerous voltages may be present at the input terminals and may not be displayed.

To “freeze” the displayed measurement on the LCD, press the HOLD button. A second press resumes normal measurement.

3.3. MAX Mode

In MAX mode, the instrument displays the maximum reading for a voltage or resistance measurement session. The maximum remains displayed until a higher value is measured.

1. Turn the rotary switch to $\tilde{\overline{V}}$ or **Ω**.
2. Press the **MAX** button. The word MAX appears on the LCD. The displayed value now updates only when a higher reading is measured. If you change the measurement setting, the maximum value resets.
3. Press **MAX** to return to normal measurement.

3.4. AC/DC Voltage Measurement

Minimize risk when measuring unknown voltage by measuring both AC and DC.

1. Turn the rotary switch to $\tilde{\overline{V}}$.
2. Touch the probes to the desired test points in the circuit.
3. Press the yellow function button to toggle between AC and DC voltage.

3.5. Continuity Check

To avoid electric shock and instrument damage while checking continuity, ensure power to the circuit is OFF and all capacitors are discharged.

1. Turn the rotary switch to  .
2. Press the yellow function button. The  icon appears on the LCD.
3. Touch the probe tips to the desired point in the circuit.
   - **If there is continuity**, the circuit's resistance is displayed.
   - **If the reading is under 30Ω**, the beeper sounds, indicating a potential short circuit.
   - **If the resistance is above 400Ω**, the LCD displays **OL**, indicating the reading is out of range.

3.6. Resistance Measurement

To avoid electrical shock and damage to the instrument when measuring resistance, ensure power to the circuit is OFF and all capacitors are discharged.

1. Turn the rotary switch to **Ω.**
2. Touch the test lead probe tips to the desired point in the circuit and read the measured resistance on the LCD.

If the resistance is above 20MΩ, the LCD displays **OL**.

3.7. Diode Check

To avoid electrical shock and damage to the instrument when checking diodes, ensure the power to the circuit is OFF and all capacitors are discharged.

1. Turn the rotary switch to .
2. Connect the red test probe to the anode side and black test lead to the cathode side of the diode being tested.

If the polarity of the test leads is reversed with diode polarity (or forward bias voltage is above 1V), **OL** appears in the LCD. This allows you to distinguish the anode and cathode sides of the diode.

3.8. Non-Contact Voltage Detection (NCV)

NCV can only detect live AC voltage referenced to the ground. Under some conditions, NCV may not detect live voltage present in electrical circuits or equipment. To ensure safety, never touch the circuit under test even if NCV does not detect voltage.

1. Turn the rotary switch to **NCV**.
2. Point the top of the instrument (labeled NCV) towards the conductor to be tested, and approach the conductor with the instrument.
3. If AC voltage is detected, the LCD backlight blinks red.

NCV can detect voltages of 100V and higher.

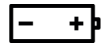
4. MAINTENANCE

The instrument has no parts that can be replaced by personnel who are not trained and approved. Any non-approved repair or other work, or replacement of a part by an "equivalent," may severely compromise safety.

4.1. Cleaning

Clean with a soft cloth regularly dipped in soapy water, and use a damp cloth to wipe any soap residue. Dry with a dry cloth or air dryer. Do not use alcohol, chemical solvent or hydrocarbon solvent cleaners.

4.2. Battery Replacement

	To avoid false readings that could compromise safety, replace the batteries with CR2032 batteries as soon as the battery indicator  appears.

Follow the battery installation steps in §2.1.

4.3. Metrological Check and Calibration

To ensure that your instrument meets factory specifications, we recommend that it be scheduled to be shipped to our factory Service Center at one-year intervals for recalibration, or as required by other standards or internal procedures.

For Instrument Repair and Calibration:
You must contact our Service Center for a Customer Service Authorization Number (CSA#). This will ensure that when your instrument arrives, it will be tracked and processed promptly. Please write the CSA# on the outside of the shipping container. If the instrument is returned for calibration, we need to know if you want a standard calibration or a calibration traceable to N.I.S.T. (this includes a calibration certificate plus recorded calibration data).

(Or contact your authorized distributor)

Costs for repair, standard calibration, and calibration traceable to N.I.S.T. are available.

NOTE: You must obtain a CSA# before returning any instrument.

4.4. Technical and Sales Assistance

If you are experiencing any technical problems, or require any assistance with the proper operation or application of your instrument, please call, mail, fax or e-mail our technical support team:

NOTE: Do not ship instruments to our Foxborough, MA address.

LIMITED WARRANTY

The Model 5115 is warranted to the owner for a period of two years from the date of original purchase against defects in manufacture. This limited warranty is given by AEMC® Instruments, not by the distributor from whom it was purchased. This warranty is void if the unit has been tampered with, abused or if the defect is related to service not performed by AEMC® Instruments.

Full warranty coverage and product registration is available on our website atwww.aemc.com/warranty.html.

Please print the online Warranty Coverage Information for your records.

What AEMC® Instruments will do:

If a malfunction occurs within the warranty period, you may return the instrument to us for repair, provided we have your warranty registration information on file or a proof of purchase. AEMC® Instruments will, at its option, repair or replace the faulty material.

Warranty Repairs

To return an Instrument for Warranty Repair: First, request a Customer Service Authorization Number (CSA#) by phone or by fax from our Service Department (see address below), then return the instrument along with the signed CSA Form. Please write the CSA# on the outside of the shipping container. Return the instrument, postage or shipment pre-paid to:

Caution: To protect yourself against in-transit loss, we recommend you insure your returned material.

NOTE: You must obtain a CSA# before returning any instrument.